



A.D. 1873, 6th MARCH. N° 808.

Apparatus for Consuming Smoke, &c.

(This Invention received Provisional Protection only.)

PROVISIONAL SPECIFICATION left by Joseph Boes at the Office of the Commissioners of Patents, with his Petition, on the 6th March 1873.

I, JOSEPH BOES, of 38, Swinbrooke Road, Notting Hill, in the County
5 of Middlesex, do hereby declare the nature of the said Invention for
“A NEW METHOD OF AND APPARATUS FOR CONSUMING SMOKE, ECONOMISING FUEL,
AND PREVENTING SMOKE IN CHIMNEYS,” to be as follows:—

In the first place I call it a system and not a provision; because it
varies in form according to the shape of the fire-place; it can be adapted
10 indefinitely to all kinds of hearths, either kitchen or drawing room, to
steam engines (or steam machines), machines fixed or moveable; to
bakers', or pastrycooks', and even in certain cases to kitchen ovens,
without regard to the nature of the fuel which is used, such as charcoal,
common coal, wood, or turf, in a word, to everything which can
15 produce smoke. This system consists in grates, metal plates, or per-

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forated funnels, and a smoke box. The manner in which these metal plates are disposed of forms the general system.

The grates, metal plates, or perforated funnels ought always to be so placed as to receive the greatest possible heat of the fire so as to become red hot; this is the essential point. 5

The smoke escaping from the fuel passes through a first metal plate or perforated funnel, and from thence is concentrated in a space which I call the smoke box; this is repeated between each grating. The smoke so concentrated coming in contact with these red hot metal plates burns of itself before arriving at the passage of the chimney, or does not 10 show itself at all, except as a vapour; in this is all the system. In all cases a passage in the chimney is necessary; it is placed in the middle or at one end of the room, according to circumstances, and the exigencies of drawing the fire, sometimes, and particularly for sitting room chimneys, a current of air may be established to assist the fire drawing. 15

The metal plates and the smoke boxes are of different shapes and names, such for instance, as in certain cases the metal plates can be called "chimney gratings," chimney pipes, or funnels, and as regards their shape it is the same for long rooms when they can be called smoke tubes or strainers. This of course depends exclusively 20 on the form which they take, according to the situation or the sort of hearth where this system is to be used, and their size and number is determined by the same circumstances.

The metal plates, gratings, funnels, and smoke boxes may be made of cast iron, steel, copper, or even cement. 25

The result which proceeds from the disposition of the smoke boxes and the gratings is a concentration of immense heat around the hearth, which as it cannot escape directly by the chimney is followed by a real economy of fuel and a very great increase of heat.

From what has been already said above, this system of utilising the 30 smoke has the advantage of not dirtying the chimney, so that it is impossible it can catch fire. This system can be adapted to chimneys actually in use. 35

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The fire can be made to be visible or not without changing the system.

I reserve to myself exclusively the right of applying this system in part or whole.

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